
NuVision
RENEWABLES

Solar Thermal Energy For Space Heating

Its An Uncertain World….

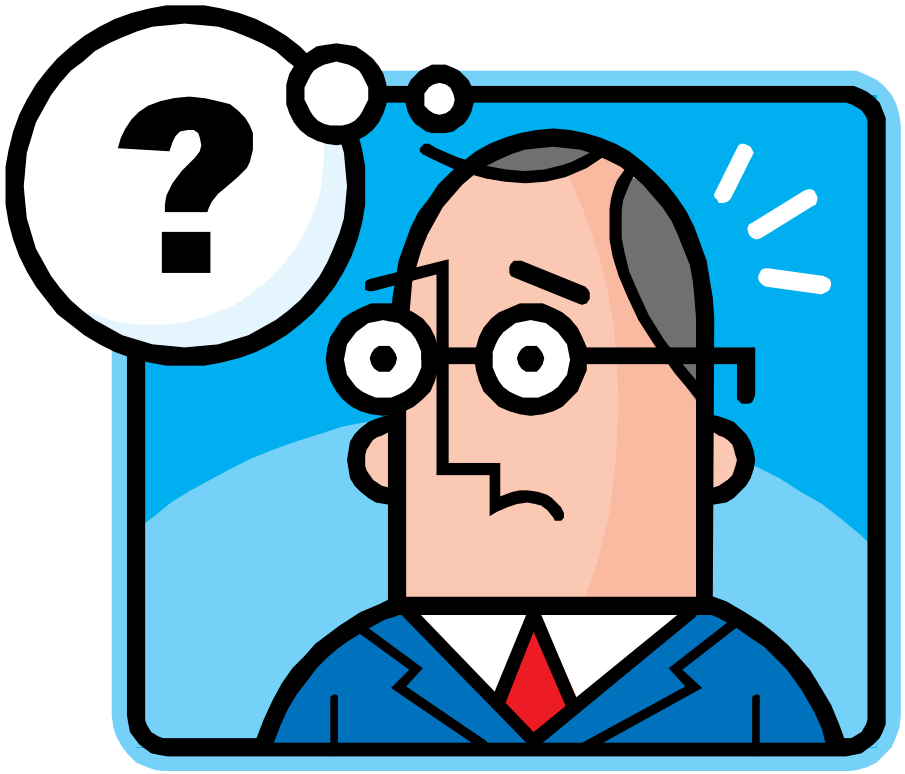
Rising Oil Prices

Political Instability

Environmental Concerns

Sluggish Economy

What's The Good News?



Introducing the REVOLUTIONARY NEW SAS-25 Solar Panel!

Designed and Patented by an **Indiana** Company

Manufacturing to begin at our Portland, Indiana facility in 2011

Proven in lab testing to be up to **40%** more effective than any other solar thermal collector

Offering a full line of products, including Pump Stations, Controllers and much more

Project #1

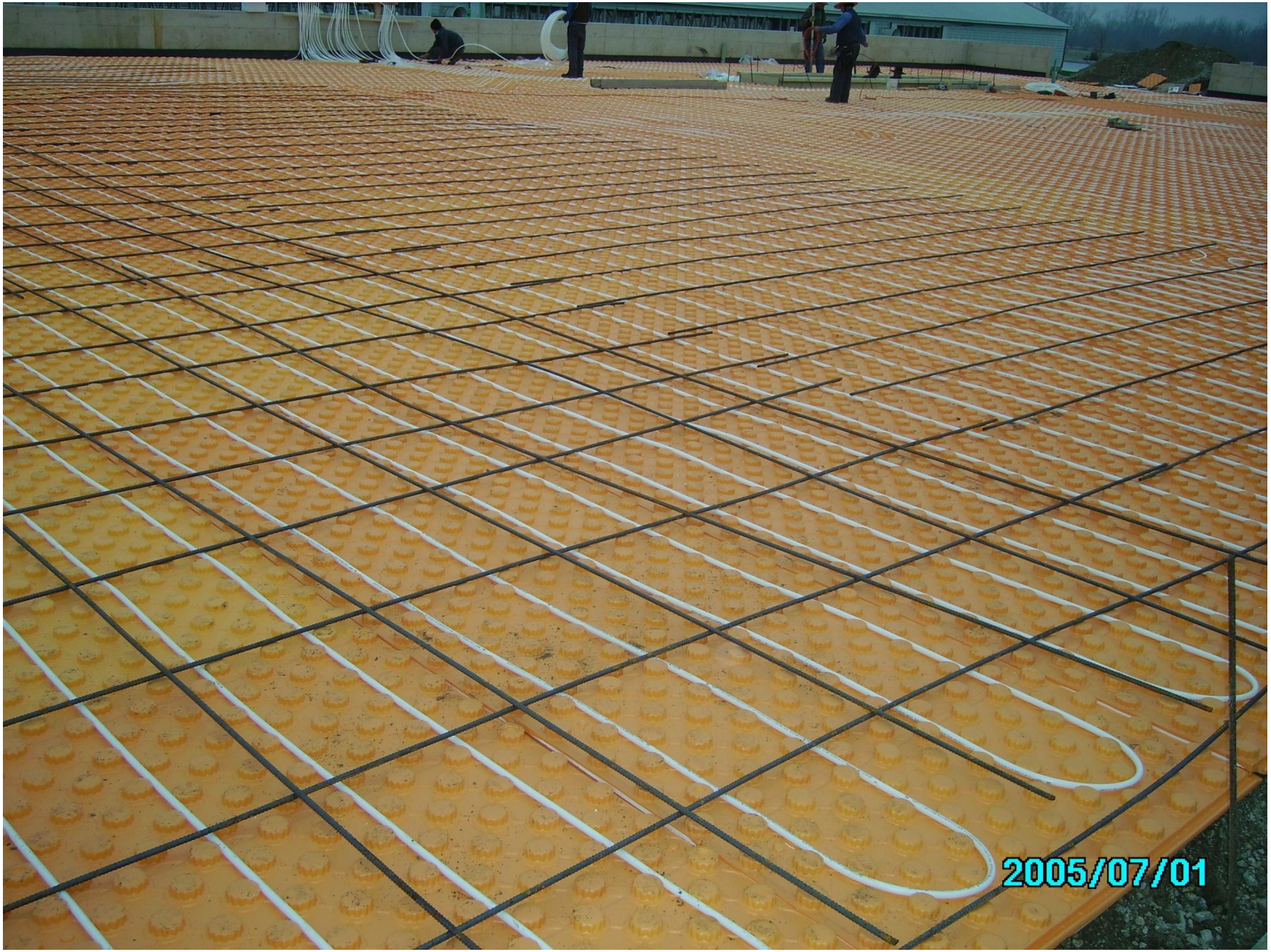
12,000 Sq Ft Commercial Building in Central Ohio, used for truck and heavy equipment repair and service.

20 foot ceiling height made conventional heating extremely expensive.

Cold concrete floor is extremely uncomfortable and adversely effects workers performance.

Solution

Radiant floor heat with solar thermal as primary heat source.


2005/07/01


HTP


CALEFFI
SOLAR
COL
162.5
iSolar 4

Emission Analysis

GHG emission					
Base case	tCO2	37.2			
Proposed case	tCO2	14.9			
Gross annual GHG emission reduction	tCO2	22.3			
GHG credits transaction fee	%				
Net annual GHG emission reduction	tCO2	22.3	is equivalent to	4.1	Cars & light trucks not used

GHG reduction income		
GHG reduction credit rate	$/tCO2	

Financial Analysis

Financial parameters			
Inflation rate	%	3.0%	
Project life	yr	25	
Debt ratio	%	0%	

Initial costs			
Heating system	$	0	0.0%
Other	$	50,000	100.0%
Total initial costs	$	50,000	100.0%

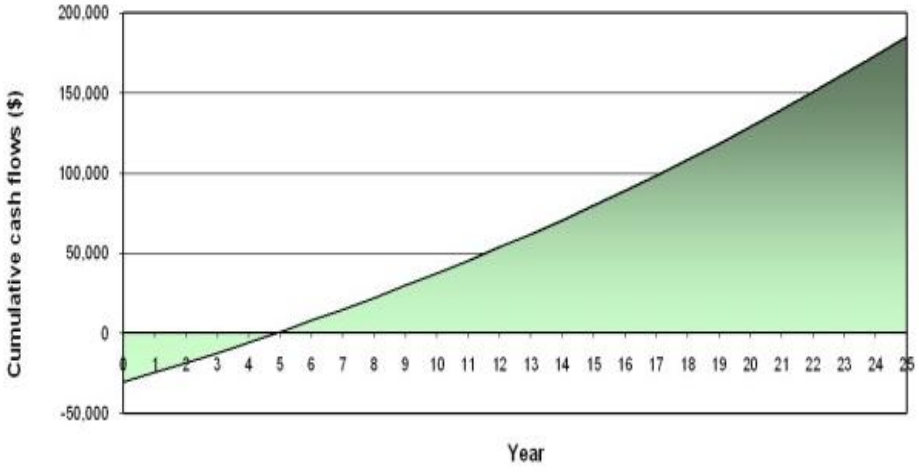
Incentives and grants	$	19,500	39.0%

Annual costs and debt payments		
O&M (savings) costs	$	
Fuel cost - proposed case	$	3,836
Other	$	
Total annual costs	$	3,836

Annual savings and income		
Fuel cost - base case	$	9,591
Other	$	
Total annual savings and income	$	9,591

Financial viability		
Pre-tax IRR - assets	%	22.2%
Simple payback	yr	5.3
Equity payback	yr	4.9

Cumulative cash flows graph



Project #2

5000 Sq Ft County office building in Northern Indiana

Concerned with high heating costs and environmental impact of fossil fuel usage

Solution

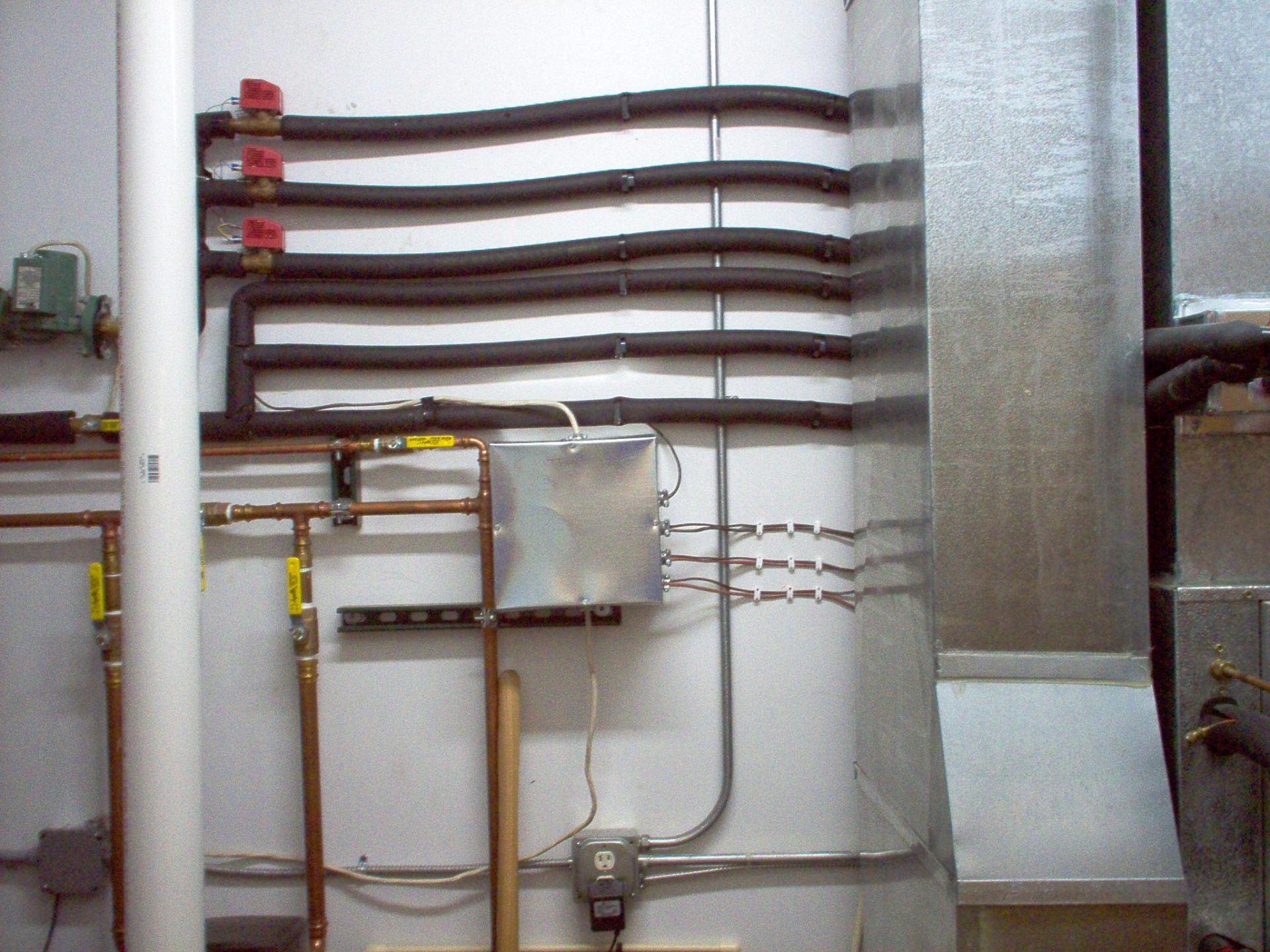
Solar thermal energy for primary source of forced air heating, 96% efficient boiler for secondary heat source.

energy.IN.gov

Energy Efficiency and Conservation Block Grant (EECBG)


Building
and
Planning


Apricus
IMPORTANT !
VERY IMPORTANT!
WARNING!!! CAUTION!!!
DO NOT USE DIELECTRIC UNIONS
WHEN HOOKING UP THIS GAS FIRED
WATER HEATING APPLIANCE!!
THIS WILL VOID THE WARRANTY!!
HOT
PHOENIX
WARNING
Gas Vent
Directly Below
Keep Clear
All Obstructions



Emission Analysis

GHG emission					
Base case	tCO2	19.3			
Proposed case	tCO2	7.2			
Gross annual GHG emission reduction	tCO2	12.1			
GHG credits transaction fee	%				
Net annual GHG emission reduction	tCO2	12.1	is equivalent to	2.2	Cars & light trucks not used

GHG reduction income		
GHG reduction credit rate	$/tCO2	

Financial Analysis

Financial parameters		
Inflation rate	%	4.0%
Project life	yr	20
Debt ratio	%	0%

Initial costs			
Heating system	$	0	0.0%
Other	$	30,000	100.0%
Total initial costs	$	30,000	100.0%

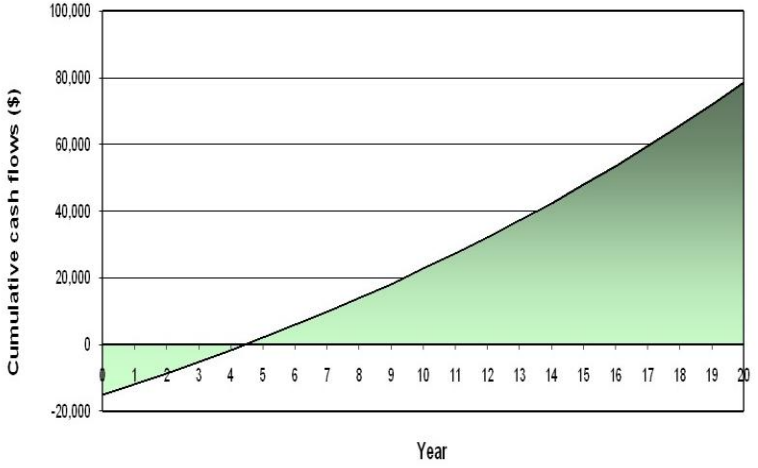
Incentives and grants	$	15,000	50.0%

Annual costs and debt payments		
O&M (savings) costs	$	-260
Fuel cost - proposed case	$	1,656
Other	$	
Total annual costs	$	1,396

Annual savings and income		
Fuel cost - base case	$	4,415
Other	$	
Total annual savings and income	$	4,415

Financial viability		
Pre-tax IRR - assets	%	24.3%
Simple payback	yr	5.0
Equity payback	yr	4.5

Cumulative cash flows graph



Project #3

1800 Sq Ft Ranch style home in North Central Indiana

Electric baseboard heat was straining the family budget, with mid-winter costs above $500 per month

Solution

Solar thermal energy for primary source of forced air heating, 96% efficient boiler for secondary heat source.


PHOENIX

Emission Analysis

Base case electricity system (Baseline)		GHG emission factor (excl. T&D)	T&D losses	GHG emission factor
Country - region	Fuel type	tCO2/MWh	%	tCO2/MWh
Canada	All types	0.196		0.196

GHG emission					
Base case	tCO2	5.8			
Proposed case	tCO2	3.2			
Gross annual GHG emission reduction	tCO2	2.6			
GHG credits transaction fee	%				
Net annual GHG emission reduction	tCO2	2.6	is equivalent to	0.5	Cars & light trucks not used

GHG reduction income		
GHG reduction credit rate	$/tCO2	

Financial Analysis

Financial parameters		
Inflation rate	%	4.0%
Project life	yr	20
Debt ratio	%	0%

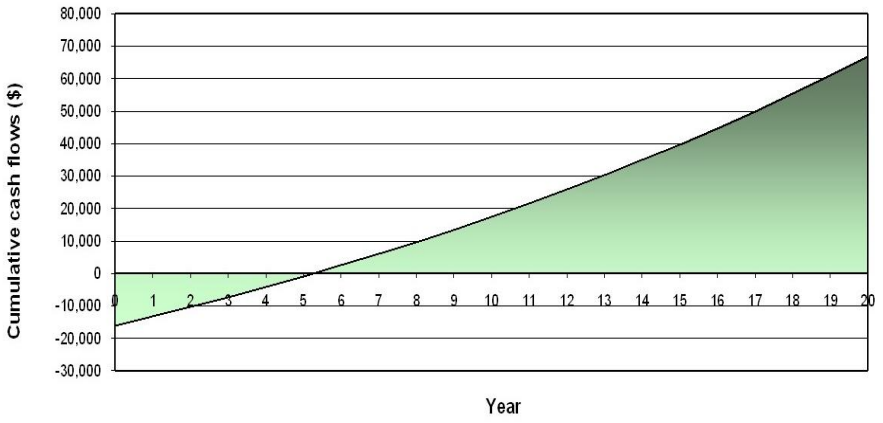
Initial costs			
Heating system	$	0	0.0%
Other	$	24,000	100.0%
Total initial costs	$	24,000	100.0%
Incentives and grants	$	8,000	33.3%

Annual costs and debt payments		
O&M (savings) costs	$	
Fuel cost - proposed case	$	885
Other	$	
Total annual costs	$	885

Annual savings and income		
Fuel cost - base case	$	3,562
Other	$	
Total annual savings and income	$	3,562

Financial viability		
Pre-tax IRR - assets	%	20.5%
Simple payback	yr	6.0
Equity payback	yr	5.3

Cumulative cash flows graph



Project #4- FCC Indiana
Industrial Process Water Heating

700 Gallon per Day Water Usage

Inbound water temperature- 65° F

Required water temperature- 125° F

Approximately 18 hours lost production time weekly

Indiana Department of Energy
APE Grant Recipient

Solution

Solar thermal energy for primary source of water heating, 93% efficient boiler for secondary heat source.


HOT WATER RETURN
SUPERSTOR

Emission Analysis

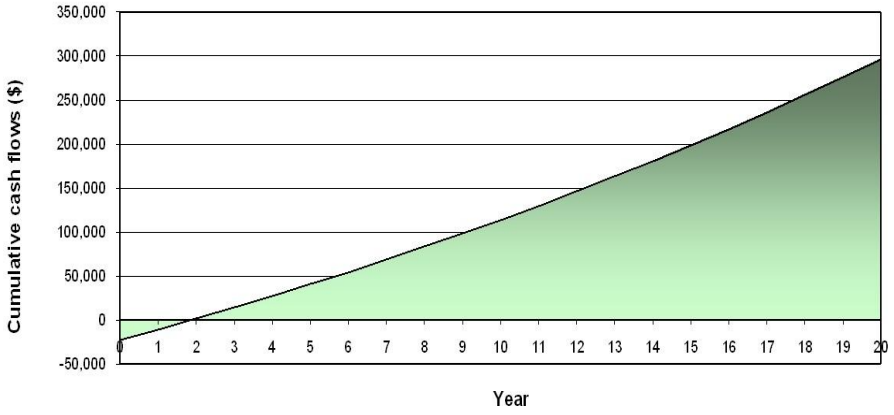
GHG emission					
Base case	tCO2	6.4			
Proposed case	tCO2	2.7			
Gross annual GHG emission reduction	tCO2	3.6			
GHG credits transaction fee	%				
Net annual GHG emission reduction	tCO2	3.6	is equivalent to	0.7	Cars & light trucks not used

GHG reduction income		
GHG reduction credit rate	$/tCO2	

Financial Analysis

Financial parameters			
Inflation rate	%	3.0%	
Project life	yr	20	
Debt ratio	%	0%	
Initial costs			
Heating system	$	0	0.0%
Other	$	63,000	100.0%
Total initial costs	$	63,000	100.0%
Incentives and grants	$	40,950	65.0%
Annual costs and debt payments			
O&M (savings) costs	$		
Fuel cost - proposed case	$	365	
Other	$		
Total annual costs	$	365	
Annual savings and income			
Fuel cost - base case	$	4,868	
Other	$	7,000	
Total annual savings and income	$	11,868	
Financial viability			
Pre-tax IRR - assets	%	56.7%	
Simple payback	yr	1.9	
Equity payback	yr	1.8	

Cumulative cash flows graph



"I'd put my money on the sun and solar energy. What a source of power! I hope we don't have to wait until oil and coal run out before we tackle that." - Thomas Edison, 1931